

Book Review

Regional and Urban GIS: A Decision Support Approach, by Timothy L. Nyerges and Piotr Jankowski. The Guilford Press, 2010. ISBN 978-1-60623-336-8.

— **Reviewed by Lorri Peltz-Lewis**

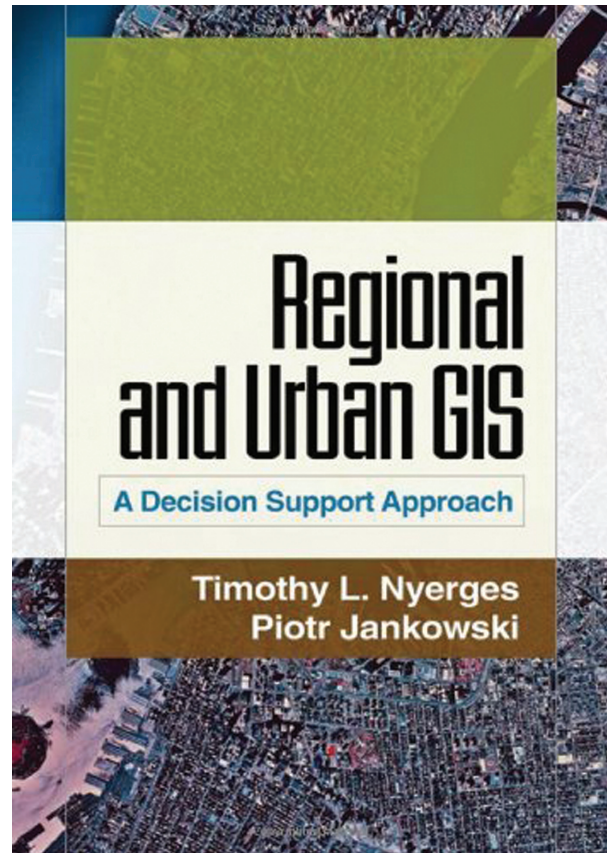
Regional and Urban GIS, A Decision Support Approach by Timothy L. Nyerges and Piotr Jankowski describes methods of systematically integrating GIS into the decision process. Such integration is exceedingly effective in the urban realm, and it can also be used in the increasingly complex environmental realm.

Part I lays out the foundational concepts of using GIS by taking the reader through the decision support approach in an example case study. From outlining the need for GIS in decision support, to addressing complex decision methods, basic concepts are presented. How geospatial technologies fit into decision support and the workflow process is presented and discussed. The decision situation assessment framework provides a method to document the decision situation.

Part II provides a systematic approach to the definition of values, goals, objectives, and criteria which give geospatial staff the ability to identify critical data, choose appropriate database development methods, and apply these effectively in geospatial data management. The chapter on GIS-based Data Analysis provides a clear and comprehensive picture of data analysis and workflows. The multi-criteria evaluation (MCE) chapter is enriched by equations expressing stakeholder requirements.

Part III illustrates data analysis for planning by reviewing multiple planning processes for major workflow components. The planning process is comprised of patterns of tasks resulting in a plan. This leads to a discussion on improvement programming and how it is “ripe for public participation in GIS.” A ten-step workflow process for a community development project is used to illustrate the integration of GIS into decision support.

Part IV discusses the use of GIS in decision support for an integrated analysis of watershed, land use, and transportation themes. The integrated analysis presents sustainability as a goal and identifies the need to effectively



link sustainability research, development, and practice.

The analyses and management methods identified in *Regional and Urban GIS* are not currently available in commercial GIS. This notwithstanding, the book provides ample proof that geospatial technology can support complex regional and urban GIS in a decision support approach at this time.

The material in this book provides all geospatial practitioners with insight into utilizing GIS more effectively in supporting complex decision-making processes. *Regional and Urban GIS* can be an excellent guide for managers and planners who have access to and utilize geospatial technologies.